CLAIMS

What is claimed is:

1. A voltage-compensated resistive touch panel, comprising:

a rectangle substrate;

a uniform resistive surface being uniformly coated on said rectangle substrate;

a plurality of resistance elements being formed on the perimeter edges of said uniform resistive surface, so as to create orthogonal electrical fields therein while a DC power is applied;

a plurality of compensating elements being spaced along the perimeter edges of said uniform resistive surface by an etching process, wherein the sizes of said plurality of compensating elements and the intervals among each said plurality of compensating elements are respectively proportional and inversely proportional to the distances being apart from the edges of said uniform resistive surface, so as to compensate bow equipotential lines generated by said orthogonal electrical fields;

a touch film being uniformly coated a conductive material on the surface facing said uniform resistive surface; and

a plurality of insulators uniformly spreading between said uniform resistive surface and said touch film.

2. The panel according to claim 1, wherein said rectangle

substrate comprises a glass substrate.

3. The panel according to claim 1, wherein the material of said uniform resistive surface comprises indium-tin oxide (ITO)

4. The panel according to claim 1, wherein the material of said plurality of resistance elements comprises low temperature silver paste.

5. The panel according to claim 1, wherein the relationships of said sizes and said intervals among said plurality of compensating elements comprise the steps of:

$$LCn = ((n * ((DA / LA) * RG + RL) * C) / DB) - LC0$$

where n represents the compensated section number, LCn represents the compensated width of the n^{th} section (unit: inch), DA represents the line distance of each section of silver paste (unit: inch), LA represent the contact length between each section of silver paste and ITO (unit: inch), RG represent the glass surface resistance (unit: ohm), RL represents the line resistance of each section of silver paste (unit: ohm), C represents an adjust constant (about 45.3), DB represents the distance of silver paste pattern (unit: inch), and LC0 represents the width (a known value) of the 0^{th} section (unit: inch).

6. The panel according to claim 1, wherein said touch film comprises a transparent plastic film.

7. The panel according to claim 1, wherein said conductive material comprises said indium-tin oxide (ITO).

8. The panel according to claim 1, wherein said plurality of insulators forms a dot spacer to prevent from an unintended touch between said uniform resistive surface and said touch film.

9. A uniform resistive surface for a voltage-compensated resistive touch panel, said uniform resistive surface comprising:

a uniform resistive surface;

a plurality of resistance elements being formed on the perimeter edges of said uniform resistive surface, so as to create orthogonal electrical fields therein while a DC power is applied; and

a plurality of compensating elements being spaced along the perimeter edges of said uniform resistive surface by an etching process, wherein the sizes of said plurality of compensating elements and the intervals among each said plurality of compensating elements are respectively proportional and inversely proportional to the distances being apart from the edges of said uniform resistive surface, so as to compensate bow equipotential lines generated by said orthogonal electrical fields.

10. The surface according to claim 9, wherein the material of said uniform resistive surface comprises indium-tin oxide (ITO)

11. The surface according to claim 9, wherein the material of said plurality of resistance elements comprises low temperature silver paste.

12. The surface according to claim 9, wherein the material of said plurality of compensating elements is the same as the material of said uniform resistive surface.

13. The surface according to claim 9, wherein the geometric pattern of said compensating elements comprises a rectangle.

14. The surface according to claim 9, wherein the relationships of said sizes and said intervals among said plurality of compensating elements comprise the steps of:

$$LCn = ((n * ((DA / LA) * RG + RL) * C) / DB) - LC0$$

where n represents the compensated section number, LCn represents the compensated width of the n^{th} section (unit: inch), DA represents the line distance of each section of silver paste (unit: inch), LA represent the contact length between each section of silver paste

and ITO (unit: inch), RG represent the glass surface resistance (unit: ohm), RL represents the line resistance of each section of silver paste (unit: ohm), C represents an adjust constant (about 45.3), DB represents the distance of silver paste pattern (unit: inch), and LC0 represents the width (a known value) of the 0^{th} section (unit: inch).